

Before the

FEDERAL COMMUNICATIONS COMMISSION

Washington, D.C. 20554

In the Matter of)
)
 An Allocation of Spectrum for)
 Private Mobile Radio Services) RM-9267
)

To: The Secretary,

Federal Communications Commission

STATEMENT OF OPPOSITION TO RM-9267

The LMCC proposal RM-9267, while apparently worded to benefit the public users, by citing such examples as the need for emergency workers to communicate in dire situations [1], is actually crafted to benefit the non-public (private) corporate users of these bands, i.e. railroad, forestry, pipeline and utility operators as well as the equipment manufacturer's the LMCC represents. Their proposal would deprive and constrict the spectrum used in the public interest, by the growing population of the Amateur Radio Service. This is especially true in the 420-450 MHz band which is the most congested UHF amateur band. The 420-450MHz Amateur Band sees constant use not only for communication that originates on this band, but also as a high-speed digital packet infrastructure (backbone) for traffic relayed from other bands.

The LMCC proposal argues the need for additional frequency spectrum so that industrial PRMS users can gain additional channels with existing equipment, when in reality much of this older equipment will not operate efficiently at 420-450 MHz without major modification or complete replacement. Their claim that CMRS services, "are not capable of prioritizing one customer's call over all others" is untrue [2]. An example to the contrary is found within IS-95 CDMA which can perform such a function. The LMCC argument that there is inadequate coverage of rural areas by CMRS is only true in the temporal sense, but in the near-term, full national cellular and PCS buildouts with superior in-building penetration to that obtainable at 420-450 MHz will be seen in both cellular and PCS networks.

Since the need for spectrum by PMRS would be more acute in urban areas, which are well served by CMRS networks, and the rural areas are not as well served (in the near-term only), a flexible solution to

No. of Copies rec'd
 11-ABCDE

10
 OCT

the problem lies in the use of multiple-mode radio equipment capable of operating CMRS where served and PMRS where spectrum and coverage exist. This would have multiple benefits:

- 1) The spectrum would be more efficiently used, as CMRS makes use of techniques such as TDMA, PCS-1900 and CDMA.
- 2) The urban areas would have adequate PMRS spectra for public use as these type generally do not require coverage over expansive areas; rather, municipal and county use of PMRS is local, and not as extensive as railroad, forestry, etc.
- 3) The rural PMRS user, both public and private would have adequate spectra for two reasons:
 - a) They are in sparsely developed areas with low traffic density, as supported by the LMCC's maps, shown in the proposal's addendum.
 - b) They would be able to take advantage of CMRS as build-outs into rural areas take place. This would result in lower traffic density on any PMRS channels that a company may retain.
- 4) In-building penetration is much better achieved at the 820-896 and 1850-1990 MHz bands due both shorter wavelength and to use of mini and micro-cells by CRMS.
- 5) This solution would preclude the need for PMRS operators to deploy and maintain multiple expensive urban facilities for their infra-structure.

The use of multiple-mode telecommunications equipment would allow PMRS system planners the flexibility to choose the bandwidth they need for the type of communications required. Presently, an example of this capability exists as supplied presently by the company Nextel, which operates a system that works with the cell site, or directly user-to-user depending on the propagation afforded. This demonstrates the technical feasibility is available for multiple-mode PMRS. Also the LMCC's argument that PMRS users may have to contract with multiple carriers in order to provide adequate coverage for its area of operation is less valid now than in the past, due to the expanded service ranges afforded by many CMRS providers, as well as the merging of several CMRS providers and their respective coverage areas.

In addition the approach of multiple-mode PMRS/CRMS outlined above, the LMCC's proposal has prematurely disposed of a very workable solution, that of the use of spectrum above 2 GHz. Their claim [3] "that a cost increase of approximately 17:1 would be incurred at 2.3 GHz" over the 450 MHz band is in this writer's opinion a gross exaggeration. As one who has actively participated in the engineering of nearly 85% of the deployed cellular/PCS systems in this country and abroad, I would expect the cost

ratio to be far less. In fact, due to more frequency reuse due to geography and far better in-building penetration than the 420-450 MHz band, the frequencies in the range of 2-3 GHz would enjoy higher capacity at lower cost/erlang. The LMCC concedes that "Future PCS technology developments in the 1850-1990 MHz band will have some degree of benefit here to reduce costs". At the present, for example, the cost delta for semiconductor components, surface-mount components and antennas is nearly zero when comparing 450 MHz with 2.3 GHz. The recent development of low-cost LDMOS power devices extends this argument into the formerly high-priced RF components.

Based on the above reasons, I am opposed to RM-9267 and that private land mobile and Amateur Radio do not have mutually compatible interests. Sharing between private land mobile and Amateur Radio is not workable. I respectfully request that you DENY the LMCC proposal in RM-9267 to share the Amateur Radio allocations at 420-430 and 440-450 MHz.

Michael J. Masterson

Michael J. Masterson
Amateur Radio Station WN2A

Principal Engineer
KDI/triangle INC, Whippany, NJ

References:

- [1] RM-9267, Sect IV, part A, pp 21,22
- [2] RM-9267, Sect IV, part B, pp 22,23
- [3] RM-9267, Sect IV, part ii, p 32

21 May 1998
7 Hudson Road
Budd Lake, NJ 07828